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3 (c2) summing the information for each of the plurality of subareas to
4 provide a resultant; and

5 (c3) dividing the resultant by the number of subareas.

1 4. The method of claim 1 wherein each of the plurality of positions is a pixel and
2 wherein the current position is a current pixel on the display.

1 5. The method of claim 4 comprising the step of:
SUB 27 (f) removing the portion if the portion is obstructed.

6. The method of claim 5 further comprising the step of:
(g) sorting each portion based on the z-value.

7. The method of claim 6 wherein the repeating step (d) further includes the step
of:
(e1) repeating steps (a) through (c) and steps (f) through (g) for each object.

1 8. The method of claim 7 wherein the repeating step (d) further includes the step
2 of:
3 (e1) repeating steps (a) through (c) and steps (f) through (g) for each of the
4 plurality of positions.

1 9. ~~A method for generating a graphical image on a display from data describing a~~
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2 plurality of objects, the display including a plurality of positions, each of the plurality of
3 positions having an area, the method comprising the steps of:

4 (a) determining if a portion of each of the plurality of objects intersects each of the
5 plurality of positions;

6 (b) providing a mask for each of the plurality of positions that the portion
7 intersects, the mask indicating an extent to which the portion occupies the area each of the
8 plurality of positions; and

9 (c) using the mask to provide antialiasing for each of the plurality of positions that
10 the portion interests.

11 10. A system for generating a graphical image on a display from data describing an
12 object, the system comprising:

13 a display including a plurality of positions, each of the plurality of positions having an
14 area;

15 a processor block coupled with the display, the processor block for determining if a
16 portion of the object intersects a current position of the plurality of positions and providing an
17 output if the portion intersects the current position;

18 an interpolator coupled with the processor block, the interpolator for interpolating the
19 data and providing a mask for the portion, the mask indicating an extent to which the portion
20 occupies the area of current position; and

21 means for utilizing the mask to provide antialiasing;

22 wherein the plurality of positions are rendered in raster order.

1 11. The system of claim 10 wherein the current position includes a plurality of sub-
2 areas, wherein the mask indicates a portion of the plurality of the subareas occupied by the
3 portion, and wherein the utilizing means further includes:

4 means for using the mask to blend information relating to the portion for the
5 portion of the subareas.

1 12. The system of claim 11 wherein the plurality of subareas further comprise a
2 number of subareas and wherein the buffer is further used to sum the information for each of
3 the plurality of subareas to provide a resultant and to divide the resultant by the number of
4 subareas.

1 13. The system of claim 12 wherein each of the plurality of positions is a pixel and
2 wherein the current position is a current pixel on the display.

1 14. The system of claim 13 further comprising:
2 means for sorting each of the at least one portion based on the z-value.

1 15. The system of claim 14 wherein the sorting means further comprise:
2 an obstructed object identifier/removal unit coupled with the processor block
3 and the interpolator, in response to the output and without determining a precise axial position
4 of the portion, the obstructed object identifier/removal unit identifies if the portion is visually
5 obstructed and removes data relating to the portion if the portion is obstructed; and
6 a hardware sorter coupled to the interpolator and the buffer for sorting the at

7 least one portion for the current position based on the z-value of the at least one portion.

1 16. A system for generating a graphical image on a display from data describing a
2 plurality of objects, the display including a plurality of positions, each of the plurality of
3 positions having an area, the system comprising:

4 a display including a plurality of positions, each of the plurality of positions having an
5 area;

6 an interpolator coupled with the processor block, the interpolator including

7 means for utilizing the mask to provide antialiasing

8 means for determining if a portion of each of the plurality of object intersects
9 each of the plurality of positions;

10 means for providing a mask for each of the plurality of positions that the
11 portion intersects, the mask indicating an extent to which the portion occupies the area each of
12 the plurality of positions; and

13 means for using the mask to provide antialiasing for each of the plurality of
14 positions that the portion intersects.